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Cycling has made a comeback: has it returned to Brussels as well?

Un retour de la bicyclette, aussi à Bruxelles ?

Terugkeer van de fiets: ook in Brussel?

Amandine Henry, Thomas Ermans and Fanny de Smet d'Olbecke

Translator: Jane Corrigan



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Cycling has made a comeback: has it returned to Brussels as well?

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AUTHOR'S NOTE

This fact sheet is a follow-up to the work on cycling in the Brussels-Capital Region carried out on behalf of Bruxelles Mobilité in the framework of the Observatoire de la mobilité de la Région de Bruxelles-Capitale.

Introduction

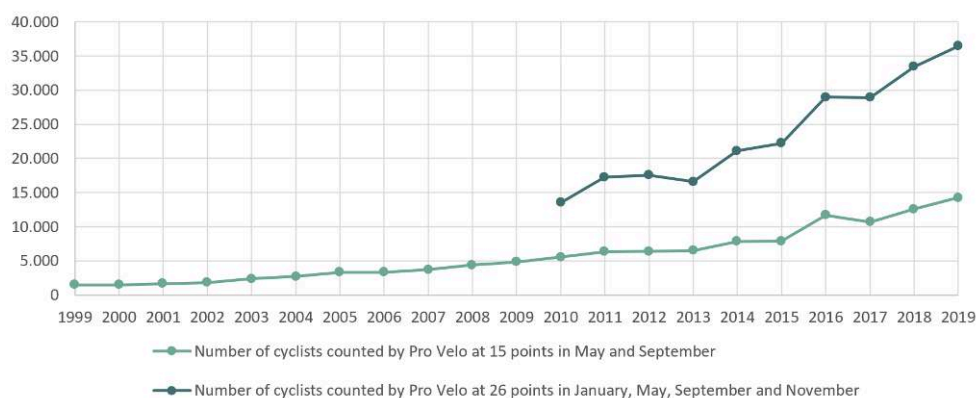
- 1 At a time when the constraints of physical distancing are forcing decision-makers to rethink the role of cycling in Brussels public space, it is worth pointing out that cycling was widespread in Brussels not so long ago. Initially only a leisure activity among the middle classes, cycling became widespread in the capital at the beginning of the 20th century when the working classes began to use bicycles. In the former province of Brabant, the number of bicycles is estimated to have increased tenfold between 1905 and 1935 [Gerken and Lannoy, forthcoming]. At that time, bicycles were the most important means of mechanised individual transportation in Brussels, far ahead of cars: in 1940 there were five times as many bicycles in Brabant as cars in the country as a whole [Gerken and Lannoy, forthcoming]. The second half of the 20th century saw a gradual decline in cycling for utilitarian purposes, precipitated by the rise of the car.
- 2 In light of this recent history, what is the role of cycling in Brussels today, and how can it be understood? Will there also be a return of cycling in Brussels, as seen in northern

Europe since the 1970s [Héran, 2014]? In this fact sheet, we shall explore the different sources and approaches which quantify cycling in the capital and its recent evolution. Our analysis is mainly based on the work carried out in the framework of the Observatoire de la mobilité de la Région de Bruxelles-Capitale [de Smet d'Olbecke *et al.*, forthcoming].

1. Sustained growth in the number of cyclists during peak hours

- 3 In recent years, cyclists seem to be taking over the streets of the capital. Pro Velo objectifies the phenomenon: since the end of the 1990s, the non-profit association has been counting cyclists between 8am and 9am on weekdays in different parts of Brussels.

Figure 1. Evolution in the number of cyclists counted by Pro Velo in BCR



Source: Pro Velo

- 4 The result of these counts is indisputable: after a slow yet constant increase in the number of cyclists until 2013, growth has accelerated in recent years. The number of cyclists counted at all points more than doubled between 2013 and 2019, from some 16 000 to more than 36 000, representing an average annual growth rate of 14 %.
- 5 But are these figures enough to validate the comeback of cycling in the capital? While they are an obvious marker of this trend, they provide an incomplete picture of the situation. Firstly, the data from Pro Velo are collected during the morning rush hour and therefore mainly reflect certain reasons for travelling: going to work and to school, dropping off children or transporting goods. Secondly, in terms of cyclist counts, these data can reflect both the evolution of cycling in travel practices in the Brussels-Capital Region (BCR) and the increase in the total number of peak-hour journeys. To put it simply, if there are more cyclists in Brussels, it is perhaps only because the number of journeys in the streets of the capital is increasing. As the population, employment within the city and the number of students have increased in Brussels during the same period [Hermia, 2020; Actiris, 2019; IBSA, 2019], some of the increase in the number of cyclists must be attributed to these underlying trends.

- 6 We shall therefore try to complete the picture by examining two aspects:
- how the practice of cycling to work has evolved among employees living or working in Brussels;
 - how the practice of cycling has evolved, whatever the reason for travel.

2. Disparate sources confirm a surge in cycling to work

- 7 Commutes to and from work have long been the subject of preferred statistical documentation in terms of labour flow management, particularly in the context of censuses. After the censuses, questions on commuting have been included in various surveys: Mobel (1999), Beldam (2010) and Enquêtes sur les Forces de Travail (EFT) from 2011 onwards. Moreover, since the mid-2000s, interest in the management of work commutes has been transposed to a more operational framework with the implementation of the Diagnostics Fédéraux des déplacements domiciles-travail (DF) and the Plans de Déplacements d'Entreprises (PDE) of the Brussels-Capital Region. Despite the fact that they are scattered, these data sources provide a relatively rich empirical basis for understanding the evolution of cycling to and from work.
- 8 These surveys all agree on one point, namely the methodological approach to the modal split of workers. They are broken down according to the main mode of travel which is reported to be used for travelling to and from work. Main mode of travel means the mode of transportation used over the longest distance. For example, workers who cycle 2 km to the train station and then take the train, are counted only as train users.
- 9 On this basis, it may be observed that over the last two decades, the proportion of workers who cycle to work has increased according to each available source since the 2000s (Figures 2a and 2b).
- 10 In detail, it may be noted that:
- This increase is most pronounced for interior workers, i.e. people who live and work in Brussels (Figure 2a). Among these, the proportion of cyclists for home-to-work travel rose from 1,2 % in 1999 to 5,7 % in 2010 according to Mobel and Beldam. If both incoming and outgoing workers are included (Figure 2b), the Brussels-related workers use bicycles less on the whole, but the trend is also on the rise;
 - The proportion of internal workers who cycle to work according to the company travel plans (PDEs) peaked at almost 10 % in 2017. It should be noted that the populations of workers surveyed in the PDEs and DFs¹ are employed in companies with more than 100 workers. On average, these workers have a higher level of education and are more often employees or managers than labourers or self-employed people, which are characteristics associated with greater bicycle use [Ermans *et al.*, 2019]. In addition, in the context of DFs and PDEs, employers implement measures more often to reimburse staff for home-to-work travel by bicycle;
 - The EFT data allow us to estimate that the proportion of workers who cycle to work was between 2,3 % and 4,2 % for internal workers during the period between 2011 to 2016 (between 1,2 % and 2,2 % for all of the Brussels-related workers). The large margins of error associated with these data do not allow valid conclusions to be drawn as to their evolution over the period.

Figure 2a. Proportion of internal BCR workers who cycle to and from work, according to different surveys

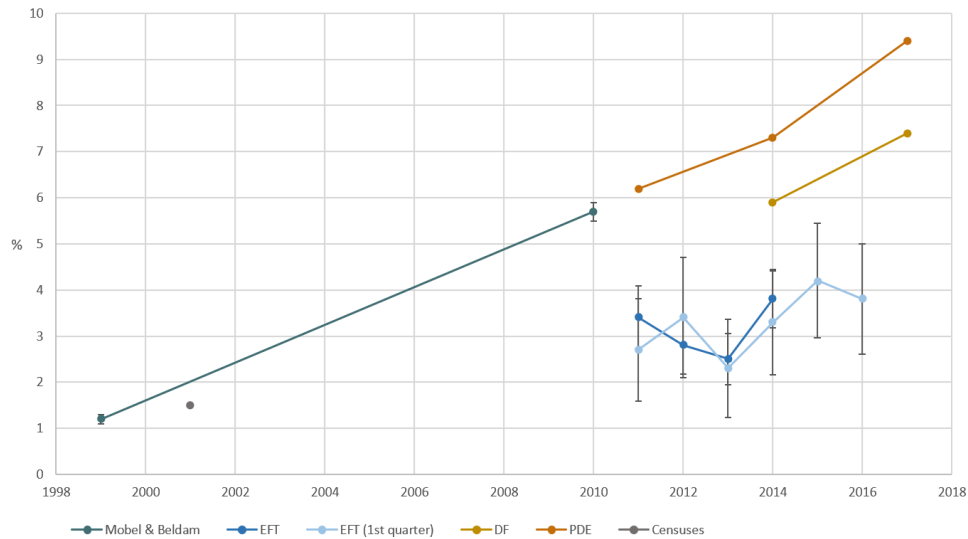
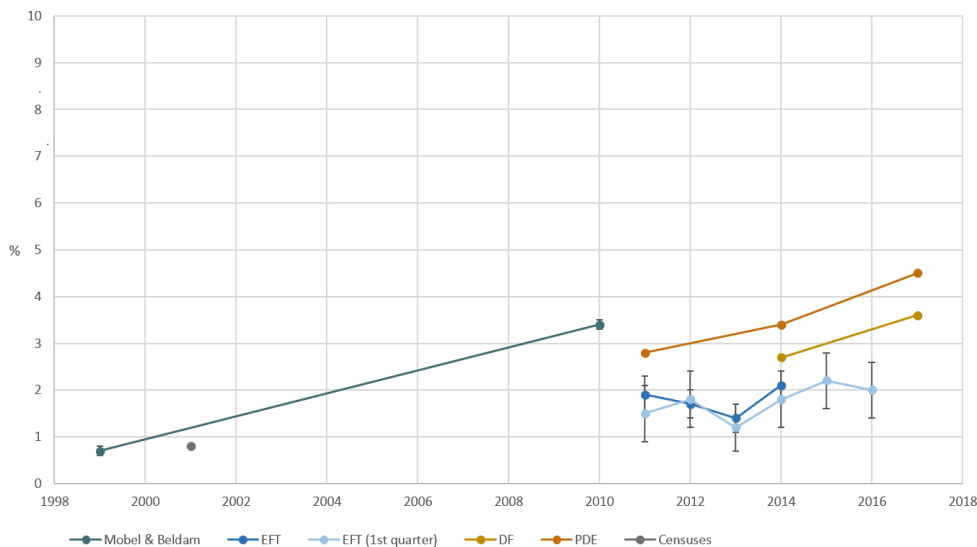


Figure 2b. Proportion of all BCR workers (internal, incoming and outgoing) who cycle to and from work, according to different surveys



Note: Data from the 2006 PDE (different sample), DFs from before 2014 (impossible to calculate) and the EFT after 2016 (methodological break) are not presented here. The PDEs do not take into account workers who leave BCR.

3. Cycling is clearly on the rise in all of its different uses

- 11 Different approaches are available to measure travel practices [see in particular Lebrun *et al.*, 2014] and cycling in particular, for all travel purposes (not just commuting). Three measurements are used here: modal shares according to main distance, citation shares and reported frequency of use.

- 12 Whatever the proposed approach, the implementation is based on the surveys on mobility practices carried out in Belgium. Mobel (1999) [Hubert and Toint, 2002] and Beldam (2010) [Cornelis *et al.*, 2012] are the benchmark surveys in this respect and are comparable over time. The Monitor survey (2017), whose methodology was more refined than those of its predecessors, is less comparable and should be considered as indicative in the context of this fact sheet.

3.1. Modal shares: cycling is gaining ground in the travel market

- 13 The modal share of cycling is calculated by relating the number of cycling journeys to the total number of journeys, whatever the mode (Lebrun *et al.*, 2014). This is, as it were, a measurement of the relative share of cycling in the travel market. In this case, the measurement is therefore based on travel, and not on the people who travel, as in the calculation of the modal split among workers (see above).
- 14 When several modes are used for the same journey, the latter is once again assigned to the mode used to cover the greatest distance. This is called the modal share method according to the main distance. If the distance is unknown, the journey is assigned according to a predefined hierarchy of modes².
- 15 According to this indicator, between 1999 and 2010, cycling increased for all Brussels-related journeys (the modal share of cycling increased from 1,6 % to 2,5 %) and, even more so for journeys strictly within the Region (the modal share of cycling increased from 1,2 % to 3,5 %). With the usage precautions mentioned above, it should be noted that the Monitor survey shows that the upward trend has continued beyond 2010, with a modal share of cycling among internal journeys estimated at 4,6 % in 2017.

Table 1. Modal shares of cycling in BCR for all purposes

Date	Travel strictly within BCR		Travel within, to and from BCR		Source
	Modal share	Number of journeys	Modal share	Number of journeys	
1999	1,2%	1 727	1,6 %	2 779	MOBEL
2010	3,5 %	2 995	2,5 %	4 499	BELDAM
2017	4,6 %	1 292	3,3 %	2 288	MONITOR

3.2. Citation shares show the popularity of cycling among commuters in particular

- 16 The method of modal shares according to main distance tends to underestimate the true significance of cycling among journeys. As cycling is generally practised over short distances, when used as a mode of transportation in conjunction with other modes, it is often neglected. This is typically the case for train journeys, for which bicycles are used

to get from the place of origin to the station or from the station to the place of destination.

- 17 The citation share method presents a satisfactory alternative from this point of view, as it relates the number of journeys for which bicycles are used, even in combination with other modes, to the total number of journeys made.
- 18 However, this indicator does not alter the modal share for internal transportation substantially: the citation share for cycling for internal transportation reached 3,7 % in 2010 compared with a modal share of 3,5 %. On the other hand, it underlines the significance of cycling in combination with other modes of transportation among journeys to and from Brussels; the citation share for cycling for all Brussels-related journeys is 3,7 % compared to a modal share of 2,5 % in 2010. It should be noted that for the latter, the cycling part of the journey often takes place completely outside the Brussels regional territory. The results of the Monitor survey once again suggest that the upward trend has continued since 2010.

Table 2. Citation shares of cycling for journeys in BCR for all purposes

Date	Travel strictly within BCR		Travel within, to and from BCR		Source
	Citation share	Number of journeys	Citation share	Number of journeys	
1999	1,3 %	1 727	1,8 %	2 779	MOBEL
2010	3,7 %	2 995	3,7 %	4 499	BELDAM
2017	4,9 %	1 292	5,1 %	2 288	MONITOR

3.3. Reported frequency of use: cycling on a regular basis is becoming widespread among the inhabitants of Brussels

- 19 Modal shares and citation shares can be used to represent the significance of cycling among all journeys, but they are not an accurate reflection of the growth in popularity of cycling among the population. For example, in a given population, if two people each use a car for four journeys and eight people each use a bicycle for one journey, the modal share of cycling will be 50 %, while 80 % of people use a bicycle. It is therefore relevant to represent cycling in direct relation to people as well.
- 20 The distribution of the Brussels population according to the frequency of bicycle use shows a high level of cycling on a regular basis (almost 14 % of Brussels inhabitants cycled at least once a week in 2010). This level of bicycle use increased in the 2000s in the same order of magnitude as modal and citation shares (factor 3). Since 2010, moderate cycling (less than one day per week) has increased somewhat.

Table 3. Frequency of bicycle use by the inhabitants of Brussels

Date	Frequency of use			Total	Number of respondents	Source
	≥ 1day/week	< 1day/week	Never			
1999	5,4 %	25,6 %	68,9 %	100 %	676	MOBEL
2010	13,6 %	26,1 %	60,4 %	100 %	1 559	BELDAM
2017	12,4 %	31,5 %	56,1 %	100 %	654	MONITOR

4. Cycling is becoming more popular, but has not taken off. Or not yet?

- 21 After the widespread use of bicycles observed during the first half of the 20th century, the modal share of cycling fell drastically to around 1 % in 1999, the year of the first national mobility survey. It was also the year of the first peak-hour cyclist counts, which have been rising steadily ever since.
- 22 Although they are based on disparate data, the results of surveys on commuting to work converge to confirm a clear and continuous growth since the early 2000s in the proportion of workers who cycle to work. This proportion is higher and is growing faster for journeys within the Region alone, which cover relatively short distances and are therefore well suited to cycling.
- 23 The lack of reliable data to quantify the current modal share of cycling in Brussels for all travel purposes is regrettable. However, as far as the 2000s are concerned, the various possible approaches show that cycling has gained ground. This is the case whether it is in proportion to the population which practises it or in proportion to travel. There has been a clear increase in terms of both internal travel alone and all Brussels-related travel. The citation share method highlights the significance of cycling in combination with other modes of transportation for inter-regional travel.
- 24 While there has been a return to cycling in Brussels, bicycle use remains relatively modest compared with Flemish cities such as Antwerp and Ghent (where almost a quarter of workers cycled to work in 2014 according to the DFs) or with emblematic cities such as Copenhagen or Amsterdam, where the modal share of cycling is around 30 % [Bruxelles Mobilité, 2016]. Moreover, cycling in Brussels is still far less common than walking, using public transport or driving a car. Despite the increase observed above, there is still substantial room for improvement. There are many factors which contribute to the growth in popularity of cycling, but among these, the rebalancing of public space and the development of special infrastructures play a significant role [Vandenbulcke *et al.*, 2011]. In this sense, the actions implemented to promote cycling during the Covid-19 crisis (creation of a structured network of cycle paths, increase in the number of shared spaces, etc.) will certainly have an impact on the popularity of cycling in the coming months. It remains to be seen whether these infrastructures and the new mobility practices generated during the crisis will continue to exist in the long term.

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NOTES

1. The lower proportions of DFs compared to PDEs can be explained in particular by the inclusion in the DFs of sites which, among companies with more than 100 employees, have between 30 and 100 employees (where bicycle use is reportedly lower) and the absence in the DFs of some European institutions (whose employees travel more by bicycle).
2. (1) train, (2) car as passenger, (3) car as driver, (4) metro / tram / bus, (5) motorcycle / scooter, (6) cycling and (7) walking

ABSTRACTS

In recent years, cyclists seem to be taking over the streets of the capital. Does this increased visibility really reflect a return of cycling in Brussels? How can we obtain an accurate understanding of the evolution of cycling? In this fact sheet, the authors explore the different sources and approaches which make it possible to quantify cycling in Brussels. They make use of the various inputs to describe the major trends in its recent evolution.

Ces dernières années, les cyclistes semblent prendre d'assaut les rues de la capitale. Cette visibilité accrue traduit-elle réellement un retour de la bicyclette à Bruxelles ? Comment appréhender correctement l'évolution de la pratique cycliste ? Dans cette *fact sheet*, les auteurs font le point sur les différentes sources et approches qui permettent de quantifier la pratique du vélo à Bruxelles. Ils mobilisent ces divers apports pour décrire les grandes tendances de son évolution récente.

De afgelopen jaren lijken de fietsers de straten van de hoofdstad te heroveren. Betekent deze toegenomen zichtbaarheid echt een terugkeer van de fiets in Brussel? Hoe moeten we de evolutie van het fietsgebruik correct begrijpen? In deze factsheet geven de auteurs een overzicht van de verschillende bronnen en benaderingswijzen om het fietsgebruik in de hoofdstad te kunnen kwantificeren. Aan de hand van de verschillende gegevens beschrijven ze de grote tendensen van de recente ontwikkeling van het fietsgebruik.

INDEX

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AUTHORS

AMANDINE HENRY

Amandine Henry has a degree in human geography and philosophy (ULB). She has worked on urban mobility at the Centre de recherches et d'interventions sociologiques (Cesir) at Université Saint-Louis - Bruxelles. She was also involved in the drafting of the *Cahier de l'Observatoire de la mobilité de la Région de Bruxelles-Capitale* on the topic of cycling. She has now joined the Institut bruxellois de statistique et d'analyse (IBSA).

ahenry[at]perspective.brussels

THOMAS ERMANS

Thomas Ermans is a geographer (Université Libre de Bruxelles) and has a complementary master's degree in statistical data analysis (Universiteit Gent). He has carried out numerous missions for the Observatoire de la mobilité as a researcher at the Centre de recherches et d'interventions sociologiques (Cesir). He now works at the Institut bruxellois de statistique et d'analyse (IBSA) and is an associate researcher at the Institut de recherches interdisciplinaires sur Bruxelles (IRIB).

termans[at]perspective.brussels

FANNY DE SMET D'OLBECKE

Fanny de Smet d'Olbecke is a geographer and urban planner from ULiège. Passionate about urban development issues, she has worked at the Centre d'Etudes Sociologiques (CES) at Université Saint-Louis - Bruxelles on issues related to urban mobility. She was one of the main contributors to the 7^e *Cahier de l'Observatoire de la mobilité* on the topic of cycling. She now works in the solutions department of Pro Velo.

f.desmet[at]provelo.org